

REMARKS

Reconsideration of the application is respectfully requested for the following reasons:

1. Rejection Under 35 USC §112, 2nd Paragraph

This rejection has been addressed by amending claim 7 to positively recite internal hardware circuit blocks.

However, the rejection of claims 7, 9, 11, and 13 as lacking clear antecedent basis for “the PEs” is respectfully traversed on the grounds that claim 7 depends from claim 5, which positively recites the PEs, with claims 9, 11, and 13 depending from claim 7. Therefore, the PEs recited in claims 7, 9, 11, and 13 have a proper antecedent basis in original claim 5.

In addition to the amendment of claim 7 to correct an antecedence error, it is noted that claim 1 has been amended to recite at least one different processing unit, as originally recited in claim 2.

2. Rejection of Claims 1-17 Under 35 USC §102(b) in view of U.S. Patent No. 6,353,841 (Marshall)

This rejection is respectfully traversed on the grounds that the Marshall patent fails to disclose or suggest a reconfigurable unit having a plurality of processing units and a plurality of switch boxes, in which the switch boxes connect different combinations of the processing units with different internal hardware components to form a variety of different functional units, as claimed. Instead, the processing units of Marshall are all arithmetic logic units (ALUs) that are identical. Furthermore, the Marshall patent fails to disclose or suggest that the different internal hardware component might be an adder, multiplier, multiplication and accumulation unit, register, and/or memory as recited in claim 15.

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According to the invention, the processing units are arranged to form processing elements (PEs) which may be operated independently or cooperate with other PEs, depending on need. Since the claimed processing units use different hardware components, it is possible to analyze hardware requirements and similarities between PEs to find the most common processing blocks and optimize formation the various functional units. In contrast, since Marshall uses identical or same processing units, the apparatus of Marshall does not have nearly the flexibility of the claimed invention.

Because the Marshall patent does not disclose all of the elements recited in the claims, withdrawal of the rejection of claims 1-17 under 35 USC §102(b) is respectfully requested.

Having thus overcome each of the rejections made in the Official Action, withdrawal of the rejections and expedited passage of the application to issue is requested.

Respectfully submitted,

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